REMARKS

This paper is being provided in response to the Office Action dated October 20, 2006 for the above-referenced application. In this response, Applicant has canceled Claims 17-20, and 37-40, added new Claims 41- 46 and amended Claims 1, 6, 15, 26 and 35 in order to clarify that which Applicant deems to be the claimed invention. Applicant respectfully submits that the amendments to the specification, the amendments to the claims, and the newly added claims do not add new matter and that the amendments to the claims are all supported by the originally filed application.

In response to the objection to the specification, Applicant has amended the specification herein in accordance with remarks set forth in the Office Action. In particular, Applicant has amended the specification, related application section on page 1, to state the current status of the provisional application. In the event that the Examiner still objects to the specification, Applicant respectfully requests that the Office Action state what additional changes are needed to overcome any further objections.

In view of the foregoing, Applicant respectfully requests that the objection be reconsidered and withdrawn.

In response to the objections to the Claims 6, 15, 26, 35, and 39, Applicant has amended Claims 6, 15, 26 and 35 in accordance with remarks set forth in the Office Action. Applicant notes that this objection as applied to Claim 39 is moot in view of the cancellation of Claim 39

herein. Accordingly, Applicant respectfully requests that the objection be reconsidered and withdrawn.

The rejection of Claims 1-40 under 35 U.S.C. 101 as being directed to non-statutory subject matter is hereby traversed and reconsideration thereof is respectfully requested. Applicant notes that this rejection as applied to Claims 17-20 and 37-40 is moot in view of the cancellation of Claims 17-20 and 37-40 herein.

Applicant's Claim 1, as amended herein, recites a computer-implemented method for performing interpolation of a point of interest producing an approximated function value of the point of interest using an input data set. Distances between the point of interest and points in the input data set are determined. The distances are sorted. A predetermined number of points in the input data set are selected which are closest to the point of interest in accordance with the distances. It is determined whether the point of interest is one of: enclosed within a simplex and on a boundary of the simplex. The simplex is formed by a combination of n+1 points selected from the predetermined number of points. The n+1 points form vertices of the simplex in which n is a dimension of points in the input data set. If there is a simplex enclosing the point of interest or including the point of interest on its boundary, a linear surface is fitted to the vertices of the simplex in accordance with a linear function. The linear function is evaluated at the point of interest to determine the approximated function value representing the approximation of said linear function at the point of interest. At least a portion of the input data set, the point of interest and the approximated function value is used for at least one of: training and verification of a neural network. Claims 2-16 depend, directly or indirectly, from Claim 1.

Applicant's Claim 1 does not merely disclose an abstract method for computing an interpolation of a point of interest. Applicant respectfully submits that Claim 1 is directed to a computer-implemented method which performs the recited steps summarized above. Claim 1 recites that at least a portion of the input data set, the point of interest and the approximated function value is used for at least one of: training and verification of a neural network. As such, Applicant's Claim 1 recites a practical application of training or verification of a neural network using at least a portion of the input data set, the point of interest and the approximated function value.

Applicant's Claim 21, as amended herein, is directed to a computer program product that includes executable code. Claim 21 recites features similar to those set forth above regarding Claim 1. Claims 22-36 depend, directly or indirectly, from Claim 21. Applicant respectfully submits that Claim 21 is directed to statutory subject matter of a computer program product comprising executable code. Furthermore, Claim 21 recites executable code that uses at least a portion of said input data set, said point of interest and said approximated function value for at least one of: training and verification of a neural network. Thus, Claim 21 recites a practical application of training or verification of a neural network using at least a portion of the input data set, the point of interest and the approximated function value.
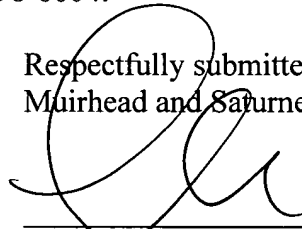
In view of the foregoing, Applicant respectfully submits that Claims 1-16, and 21-36 are directed to statutory subject matter and are in accordance with 35 U.S.C. 101.

In view of the foregoing, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Applicant respectfully submits that newly added Claims 41-46 are patentable over the cited art.

Based on the above, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8604.

Respectfully submitted,
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